

CLAIMS

1. Method for the increase of the volume during the baking process of bakery products which comprises the step of adding a sufficiently effective amount of rhamnolipid in said bakery products.

2. Method for the improvement of dough or batter stability during the baking process of bakery products which comprises the step of adding a sufficiently effective amount of rhamnolipid in said bakery products.

3. Method for the improvement of dough crumb and/or crust texture of bakery products which comprises the step of adding a sufficiently effective amount of rhamnolipid in said bakery products.

4. Method for the improvement of the shape of bakery products which comprises the step of adding a sufficiently effective amount of rhamnolipid in said bakery products.

5. Method for the improvement of width of cut of bakery products which comprises the step of adding a sufficiently effective amount of rhamnolipid in said bakery products.

6. Method for the improvement of properties of butter cream, decoration cream and/or of non-dairy cream filling for Danish pastries, croissants and other fresh or frozen fine confectionery products which comprises the step of adding a sufficiently effective amount of rhamnolipid in said cream.

7. Method for the improved microbial conservation of bakery products which comprises the step of adding a sufficiently effective amount of rhamnolipid in said bakery products.

8. Method according to any of claims 1 to 7, characterised in that the rhamnolipid will be added to the ingredients as a dry powder.

9. Method according to any of claims 1 to 7, characterised in that the rhamnolipid will be added to the ingredients as an aqueous solution or emulsion.

10. Method according to any of the preceding  
5 claims, further comprising the step of adding other additives selected from the group consisting of  $\alpha$ -amylase, xylanase, lipase, oxido-reductase, ascorbic acid, azodicarbonamide, monoglycerides, diacetyl tartaric acid of monoglycerides, stearylactylates and propionates.

10 11. Method according to any one of the preceding claims, characterised in that the bakery product is selected from the group consisting of bread, hard rolls, soft rolls, hamburger buns, baguettes, flat bread, pizza, croissants, Chinese steam breads, Argentine breads,  
15 Schnittbrötchen, sponge cakes and cakes.

12. Bread improver composition, liquid, powder or emulsion, or a ready to use optimized mix, liquid, powder or emulsion, which comprises at least 0.01% (w/w) of rhamnolipids on flour in the final product, and  
20 other usual active ingredients preferably selected from the group consisting of enzyme emulsifiers and oxido reductantia, wherein the rhamnolipids increase the volume and/or increases the cut width and/or improve the dough or batter stability and/or improve the texture and/or improve  
25 the shape, and/or improve microbial conservation of bakery products.

13. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 12, comprising at least one of  $RhC_{10}C_{10}$  and  $RhRhC_{10}C_{10}$ .

30 14. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 12 or 13 comprising rhamnolipids and at least one other improver component that acts synergistically with the rhamnolipids.

15. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 14, wherein said other improver component is Lipase.

5 16. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 15, wherein said other improver component is Lipopan F and wherein the synergistic mixture increases the volume of baked products.

10 17. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 15, wherein said other improver component is Lipopan F and wherein the synergistic mixture increases dough stability of bakery products.

15 18. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 14, wherein said other improver component is gluten and wherein the synergistic mixture increases the volume of bakery products when added to a dough that is later frozen in between mixing and baking.

20 19. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 14, wherein said other improver component is ADA and wherein the synergistic mixture increases the volume of bakery products when added to an overnight fermented dough.

25 20. The improver composition, liquid, powder, emulsion or ready to use mix according to any of claims 12 to 19, wherein the rhamnolipids are obtained from a culture broth of *Pseudomonas sp.* fermentation.

30 21. The improver composition, liquid, powder, emulsion or ready to use mix according to claim 20, wherein said *Pseudomonas sp.* is selected from the group consisting of LMG P-22041, LMG P-22042, LMG P-22064, LMG P-22065 and LMG P-22040.

22. The improver composition, liquid; powder, emulsion or ready to use mix according to claim 20 or 21,

wherein the rhamnolipid produced is a RhC<sub>10</sub>C<sub>10</sub>, RhRhC<sub>10</sub>C<sub>10</sub>, RhC<sub>10</sub> or a RhRhC<sub>10</sub> rhamnolipid or a variant thereof with a shorter or longer side chain.

23. The use of a *Pseudomonas* strain selected  
5 from the group consisting of strains with accession numbers LMG P-22041, LMG P-22042, LMG P-22064, LMG P-22065 and LMG P-22040 for the production of rhamnolipids to be used in any of the methods according to claims 1 to 11 or in any of the improver compositions, liquids, powders or emulsions,  
10 or ready to use optimized mixes, liquids, powders or emulsions according to any of claims 12 to 22.

24. The use according to claim 23, wherein the rhamonolipids produced comprise at least one rhamnolipid selected from the group consisting of a  
15 RhC<sub>10</sub>C<sub>10</sub>, RhRhC<sub>10</sub>C<sub>10</sub>, RhC<sub>10</sub> and a RhRhC<sub>10</sub> rhamnolipid or a variant thereof.